

**METHOD AND APPARATUS FOR PROVIDING AND INTEGRATING HIGH-
PERFORMANCE MESSAGE QUEUES IN A USER INTERFACE
ENVIRONMENT**

Abstract of the Disclosure

5 A method and apparatus is provided for providing and integrating high-
performance message queues. "Contexts" are provided that allow independent worlds to
be created and execute in parallel. A context is created with one or more threads. Each
object is created with context affinity, allowing any thread inside the context to modify
the object or process pending messages. Threads in a different context are unable to
10 modify the object or process pending messages for that context. To help achieve
scalability and context affinity, both global and thread-local data is often moved into the
context. Remaining global data has independent locks, providing synchronized access
for multiple contexts. Each context has multiple message queues to create a priority
queue. There are default queues for sent messages and posted messages, carry-overs
15 from legacy window managers, with the ability to add new queues on demand. A queue
bridge is also provided for actually processing the messages.